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Appeal No. H2-10932

Japanese Patent Application No. S60-199077

Application Date: September 9, 1985

First Publication No. S62-57965 Publication Date: March 13, 1987

Title of the Invention:

WATER PURIFIER FILTER MODULE

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Mitsubishi Rayon Co., Ltd.

#### Description

#### 1. Title of the Invention

Water Purifier Filter Module

### 2. Claim

1. A water purification filter module comprising a hollow fiber membrane that is folded back by a prescribed width without the end portions being cut and a fibrous material that is arranged in a direction that is substantially perpendicular to the hollow fiber membrane at least in proximity to both end portions of the hollow fiber membrane, wherein a hollow fiber membrane sheet material, in which the fibrous material is interweaved in a chain stitch by a knitting machine into the hollow fiber membrane, is bundled, and after one end is fixed by resin, an open end can be formed by cutting the resin-fixed end surface.

Brief Explanation of the Drawings

- FIG. 1, FIG. 2, and FIG. 3 are each examples of a hollow fiber membrane sheet material used in the present invention.
- FIG. 4 is a partial cross-sectional view in the step in which a hollow fiber membrane sheet material is bundled to make a membrane module having a configuration in which one end is fixed.
- FIG. 5, FIG. 6, FIG. 7 and FIG. 8 are respective variously shaped examples of membrane modules with which the hollow fiber membrane sheet material of the present invention can be used.
- FIG. 9 is a cross-sectional view that shows an example of a water purifier that is made by using the water purifier filter module of the present invention.

### Brief Explanation of the Reference Numerals

- 1 hollow fiber
- 2, 3 fibrous material
- 4 cut portion
- 5 hollow fiber membrane accommodating vessel
- 6 hollow fiber membrane sheet material
- 7 jig for resin fixing
- 8 resin injection inlet
- 9 injected resin
- 10, 17, 20, 23 resin fixed portion
- 11 cylindrical container
- 12, 13 hollow fiber membrane sheet material rolled into a coil shape
- inner tube of hollow cylindrical vessel
- outer tube of hollow cylindrical vessel
- 16 hollow portion
- 18, 21 hollow fiber membrane sheet material
- 19, 22 hollow fiber membrane accommodating vessel
- 24 hollow fiber membrane filter layer
- 25 active carbon filled layer
- 26 O-ring valve
- 27 source water inlet
- 28 processed water outlet
- 29 processed water feed portion
- 30 mortar-shaped space portion
- 31 resin fixed portion

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